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Altri autori (Persone)	Al-KhayriJameel M JainShri Mohan
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Nota di contenuto	Part I: Grass Fiber Crops -- Chapter 1: Bamboo (<i>Dendrocalamus strictus</i> Roxb. Nees) Breeding: Current Status and Future Prospects -- Chapter 2: Barley (<i>Hordeum vulgare</i> L.) Fiber Breeding -- Chapter 3: Breeding and Biotechnology Approaches for Genetic Enhancement in Maize (<i>Zea mays</i> L.) -- Chapter 4: Oat (<i>Avena sativa</i> L.): Genetic Diversity, Breeding Innovations, Technological Progress, and Conservation Approaches -- Chapter 5: Genetic Improvement of Sorghum (<i>Sorghum bicolor</i> L. Moench) through Biotechnology -- Chapter 6: Genetic Improvement of Sugarcane (<i>Saccharum</i> spp.) for Sugar, Fibre and Biomass Energy through Breeding and Biotechnology -- Chapter 7: Molecular Breeding and Biotechnology for Wild Sugarcane (<i>Saccharum spontaneum</i> L.) -- Chapter 8: Modern Breeding Strategies and Tools in Bread Wheat (<i>Triticum aestivum</i> L.) -- Part II: Bast Fiber Crops -- Chapter 9: Breeding and Biotechnology Approaches for Genetic Enhancement in Bananas (<i>Musa</i> spp.) -- Chapter 10: Advances in Flax (<i>Linum usitatissimum</i> L.) Breeding and Biotechnology Strategies -- Chapter 11: Industrial Hemp (<i>Cannabis sativa</i> L.) Breeding -- Chapter 12: Molecular Breeding Fundamental of Indian hemp (<i>Apocynum cannabinum</i> L.) --

Chapter 13: Tossa Jute (*Corchorus olitorius* L.) Breeding -- Chapter 14: Advanced Plant Breeding, Genetics and Biotechnology on Roselle (*Hibiscus sabdariffa* L.) -- Chapter 15: Conservation Challenges, Utilization, and Improvement Prospects of Prickly Pear (*Opuntia ficus-indica* L. Mill) -- Chapter 16: Plant Breeding, Genetics and Biotechnology on Pierre (*Pongamia pinnata* L.) -- Chapter 17: Plant Breeding and Biotechnological Breakthroughs in Improvement of Sunn Hemp (*Crotalaria juncea* L.) -- Chapter 18: Breeding and Biotechnology of Veldt Grape (*Cissus quadrangularis* L.): Current Status and Future Prospects -- Chapter 19: Advancements in Plant Breeding and Biotechnology for Breeding Strategies of Betel Nut (*Areca catechu* L.) -- Chapter 20: Black Wattle (*Acacia mangium* Willd.): Current Issues, Challenges and Opportunities for Advance-Generation Breeding Strategy.

Sommario/riassunto

This book compiles a wide range of topics relevant to studying the use of both innovative and conventional plant breeding methods to develop new varieties of grass and bast fiber crops under various environmental conditions for sustainable fiber production. The book contains 20 chapters supported by 153 color figures and 61 tables. The chapters are grouped into two parts. Part I, subtitled Grass Fiber Crops, covers the genera *Dendrocalamus*, *Hordeum*, *Zea*, *Avena*, *Sorghum*, *Saccharum* and *Triticum*. Part II, subtitled Bast Fiber Crops, covers the genera *Musa*, *Linum*, *Cannabis*, *Apocynum*, *Corchorus*, *Hibiscus*, *Opuntia*, *Pongamia*, *Crotalaria*, *Cissus*, *Areca* and *Acacia*. Each chapter discusses breeding techniques for specific species or a group of related species. Topics covered include current cultivation methods and challenges, biodiversity, germplasm conservation, breeding methods including conventional, molecular, tissue culture, genetic engineering, gene editing, hybridization, and mutation breeding. Each chapter concludes with future research directions and a comprehensive list of references for further reading. Seventy-nine globally recognized scientists from 11 different nations contributed to the chapters based on their expertise in the subject. The chapters underwent a thorough review process to ensure scientific accuracy and presentation quality. The book is a valuable resource for professional plant breeders and geneticists, researchers, entrepreneurs, and graduate students who are interested in biotechnology, molecular breeding, and agriculture. .
